**REMARKS**

This paper is submitted in response to the Office action mailed on July 16, 2009. This paper amends claims 1, 13-16, 26, 37, 39, and 49 and cancels claims 40-48. Accordingly, after entry of this Amendment and Response, claims 1-39 and 49-52 will be pending.

### I.  Claim Rejections Under 35 U.S.C. § 103

The Office action rejects claims 1-52 under U.S.C. § 103(a) as unpatentable over Arnold et al. (U.S. Patent No. 7,103,877) (hereinafter "Arnold") in view of Whatley, "A Portable Sampling-Based Profiler for Java Virtual machines", 2000, ACM, pages 78-87 (hereinafter "Whatley").  For at least the following reasons, the Applicant respectfully submits that claims 1-39 and 49-52 are patentable over the combination of Arnold and Whatley.

To reach a proper determination under 35 U.S.C. § 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention.  *See MEP 2142.*

Among other limitations, amended independent claim 1 recites "a first set of instructions...that tags instruction instances, that may consume execution time based on loading of data, with identifiers that describe the instruction instances with source-level data object language constructs."  Independent claim 49 and amended independent claims 16 and 26 recite similar limitations.  The combination of Arnold and Whatley does not teach or suggest the above limitation.

The Office action relies on Whatley as disclosing the above limitation.  However, Whatley discloses that the sampling profiler periodically samples running threads to update data in a profile repository.  *See Whatley; section 4, paragraph 2, page 81.*  This profile repository utilizes a data structure called a partial calling context tree, or PCCT, to store and organize the sampled profile information.  *See Whatley; section 5, page 82.*  The just-in-time compiler obtains profile data from the PCCT in order to determine how and whether to compile portions of code before execution.  *See Whatley; section 3, paragraph 2, page 80.*

Whatley does not describe tagging instruction instances.  Rather, Whatley updates the data structure (the PCCT) in the online measurement system based on data sampled by the sampling profiler.  *See Whatley; section 4, paragraph 2, page 81.*  The just-in-time

compiler utilizes profile data stored in the PCCT to make decisions about how to compile code, but does not tag instruction instances with identifiers that describe the instruction instances with source-level data object language constructs. *See Whatley; section 3, paragraph 2, page 80.* The node annotation in Whatley referenced by the Office action annotates nodes in the data structure containing profile data that is stored in the online measurement system, not instruction instances. *See Whatley; section 5.1, pages 82-83.* Hence, Whatley does not disclose tagging instruction instances with identifiers that describe the instruction instances with source-level data object language constructs.

Arnold does not cure the defects of Whatley. Arnold discloses identifying yield points in a program to be executed and statistically sampling program behavior at a subset of the identified yield points to reduce overhead compared to exhaustive sampling at all identified yield points. *See Arnold; col. 2, lines 19-26.* Arnold does not disclose tagging instances with identifiers that describe the instruction instances with source-level data object language constructs.

Therefore, for at least these reasons, the combination of Arnold and Whatley does not teach or suggest all of the limitations of independent claims 1, 16, 26, and 49 as a whole. Hence, the Applicant respectfully submits that claims 1, 16, 26, and 49 are patentable over the combination of Arnold and Whatley.

Claims 2-15, 17-25, 27-39, and 50-52 depend from claims 1, 16, 26, and 49, respectively, which are patentable for at least the reasons recited above. The Applicant respectfully submits that claims 2-15, 17-25, 27-39, and 50-52 are patentable at least based on their dependence on an allowable base claim.

Claims 40-48 have been cancelled and the Applicant respectfully submits that these rejections are moot with regards to these claims.

### II.  Conclusion

The Assignee thanks the Examiner for his thorough review of the application.  The Assignee respectfully submits the present application, as amended, is in condition for allowance and respectfully requests the issuance of a Notice of Allowability as soon as practicable.

The Assignee believes no fees or petitions are due with this filing.  However, should any such fees or petitions be required, please consider this a request therefor and authorization to charge Deposit Account No. 04-1415 as necessary.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney.

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Respectfully submitted,

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